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April 18, 2014

Mr. Joe Fredle
On-Scene Coordinator
Emergency Response Branch
U.S. Environmental Protection Agency Region V
25089 Center Ridge Road
Westlake, OH 44145

**Subject: ER-Bedford Anodizing Tanks and Vats
Macedonia, Summit County, Ohio
Technical Direction Document No.: S05-000-1308-003
Document Control No.: 2233-2A-BIZR
WESTON START Contract No.: EP-S5-06-04
Work Order No: 20405.012.001.2233.00**

Dear Mr. Fredle:

The Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) prepared this letter report in accordance with the requirements of Technical Direction Document (TDD) No. S05-000-1308-003 assigned by United States Environmental Protection Agency (EPA) to START. The EPA tasked START to perform the following activities at the Site:

- Inventory of containerized materials;
- pH field screening of materials stored in open tanks, vats, and drums;
- Installation of temporary monitoring wells to determine the horizontal extent of subsurface alkali liquid contamination;
- pH field screening of water samples collected from the temporary monitoring wells; and
- Documentation of Site conditions and activities.

This letter report provides a Site description; Site background; and summarizes the removal assessment activities conducted at the Site from August 21, 2013 to December 13, 2013.

SITE DESCRIPTION

The Site is located at 7860 Empire Parkway, Macedonia, Summit County, Ohio (**Attachment A, Figure 1**). The Site coordinates are 41°17'35" North latitude and 81°30'10" West longitude. The Site encompasses approximately 21 acres and contains one large manufacturing building and one covered equipment storage pad (**Attachment A, Figure 2**). These two structures occupy approximately 5 acres of the Site property. For the purposes of this removal assessment, the site

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Bedford Anodizing Site Assessment
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building was divided into grids using the existing roof skylights as a layout. The grid layout consisted of letters (A through H) running west to east along the north edge of the building and numbers (1 through 11) running north to south along the western edge of the building (**Attachment A, Figure 3**). The building is in a state of deterioration. Presently, the roof is leaking and has partially collapsed in several locations. Precipitation from the leaking roof is accumulating on the floor into some of the anodizing vats. Electrical and gas services have been disconnected from the property. The Site is located in an industrial park, which is surrounded by wetlands and forested areas. The Site is bounded to the north, west, and south by forested areas and to the east by an electrical power company easement. The Site has a partial perimeter fence, but access is unrestricted in several locations. A drainage ditch flows north to south along the eastern Site perimeter. An abandoned railroad spur is located within this drainage ditch. South of the site building, the drainage ditch turns to the west and flows east to west into the adjacent forested property, where it eventually joins with an unnamed creek.

BACKGROUND

The Bedford Anodizing Company formally operated as an aluminum anodizing facility until operations ceased in June, 2013. The company originally began operations in Bedford, Ohio in 1978 and operated at this Bedford, Ohio location until it ceased operations at some time in 1990.

Early March, 2011, the Ohio Environmental Protection Agency (OEPA) responded to a complaint of released wastewater, containing aluminum hydroxide, overflowing from a blocked sanitary sewer into the drainage ditch on the eastern Site perimeter. OEPA issued a Notice of Violation (NOV) on March 18, 2011 and instructed the Site owner to remove sediment from the impacted areas. Due to no subsequent corrective actions by the Site owner to perform the NOV required cleanup activities, the OEPA requested the assistance of EPA. In April, 2011, EPA conducted some interim removal action activities at the Site, which focused on the removal of the aluminum hydroxide-impacted sediment from the drainage ditch on the Site and the unnamed creek on the adjacent forested property. Removal action activities included: excavation of impacted sediment; sediment solidification and staging; and offsite waste disposal.

Prior to the cessation of facility operations in June, 2013, the OEPA responded to another release of wastewater from the facility entering the drainage ditch on the eastern Site perimeter. OEPA observed precipitation leaking through the roof at various locations, mixing with spilled material on the floor, and flowing outside of the building through openings between the eastern building wall and the floor. OEPA instructed the Site owner to install sumps in the drainage ditch, between the eastern wall of the building and the railroad tracks to determine if site-related contaminants are migrating away from the building into the adjacent drainage ditch. Over time, a dark brown liquid was observed accumulating at the bottom of some of the sumps. Field screening of the liquid within the sumps indicated pH detections up to 13 standard units (SU).



REMOVAL ASSESSMENT ACTIVITIES

On August 21, 2013, EPA, START, and EPA's Emergency and Rapid Response Services (ERRS) contractor performed an initial walkthrough of the Site. START conducted an inventory and pH field screening of materials stored in tanks, vats, totes, drums, and small containers onsite. A detailed summary of the container inventory and pH field screening results is presented in **Attachment B, Table 1**. Label information and generator knowledge were used to identify the containerized materials during the inventory. A photographic log of Site conditions and activities conducted during the removal assessment is presented in **Attachment C**.

During the walkthrough and container inventory, START conducted real-time air monitoring using a MultiRAE Plus multi-gas monitor and gamma radiation screening using a Ludlum Model 19 (Micro-R) gamma radiation meter. Monitoring results did not exceed background levels throughout the Site during removal assessment activities.

One main anodizing line was identified during the removal assessment, located along the eastern edge of the site building in grids G3-G6 and H3-H6. This anodizing line consists of 30 similarly sized vats containing acidic solutions, alkali solutions, dyes, solid alkali waste, and rinse solutions. A wastewater treatment system, consisting of 21 tanks, is located along the northern edge of the site building in grids D1-D2 and E1-E2. In addition to the main anodizing line and wastewater treatment area, 57 additional open vats, 35 tanks, and 210 drums are located throughout the site building and on the covered equipment storage pad. During the walkthrough and inventory, START observed portions of the roof to be leaking and partially collapsed over the main anodizing line and evidence of precipitation entering the open vats, possibly causing them to overflow onto the floor.

START conducted pH field screening of the contents in open and accessible tanks, vats, and drums on the Site. Results of the pH field screening summarized in Table 1 indicated that the contents of 11 vats exhibited pH results of 0-2 SU; and the contents of 2 tanks, 9 vats, 5 drums, and 1 area of spilled material on the floor exhibited pH results of 12.5-14 SU. Pursuant to 40 *Code of Federal Regulations* (CFR) 261.22, these materials are considered to be hazardous based on the Resource Conservation and Recovery Act (RCRA) characteristic of corrosivity, defined as: "a solid waste exhibits the characteristic of corrosivity if a representative sample...is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5..."

Although evidence of trespassing onto the Site was not documented during the site visit, access onto the Site and into the buildings is unrestricted. There is limited fencing around the Site and openings into the building could allow for access and potential exposure to hazardous substances stored on the Site.

On September 26, 2013, START completed 14 soil borings (which were subsequently converted into temporary monitoring wells) at the Site to determine the horizontal extent of alkali liquid contamination along the eastern edge of the building (**Attachment A, Figure 4**). Two soil borings were completed within the building, one at the north end of the main anodizing line (SB-1) and one at the south end of the main anodizing line (SB-2). Five soil borings were completed



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in the drainage ditch, between the eastern wall of the building and the railroad tracks (SB-3, SB-4, SB-12, SB-13, and SB-14). Finally, seven soil borings were completed in the drainage ditch, east of the railroad tracks (SB-5, SB-6, SB-7, SB-8, SB-9, SB-10, and SB-11). START logged the soil cores to determine the depth of fill material over native soil and to identify the uppermost water bearing unit in which to set the temporary monitoring wells. Temporary monitoring wells were installed at all the boring locations with a screened interval of 3-8 feet below ground surface (bgs).

START conducted pH field screening of the soil cores at 2-foot intervals using pH paper. Results of the pH field screening indicated the 0-2 foot interval at boring locations SB-1, SB-2, and SB-4 exhibited pH results of 11 SU. The 2-4 foot interval at boring location SB-1 exhibited a pH result of 10 SU. The 4-6 foot interval of boring location SB-1 exhibited a pH result of 7 SU. The 0-2 foot interval of boring location SB-5 exhibited a pH result of 9 SU. All other pH field screening results were 6 SU.

On October 2, 2013, START collected liquid samples from the bottom of each of the temporary monitoring wells using a peristaltic pump and disposable tubing. START conducted pH field screening of the liquid samples using a pH meter. Results of the field screening indicated that ground water pH readings were highest in MW-1 & MW-2 (9.41 and 9.42 respectively), which were located in the building. The ground water pH readings trended toward neutral (7.16 – 8.15) further east from the building.

On October 23 and October 25, 2013 START returned to site after ERRS completed removal activities to update the container inventory and the estimated volumes of the bulk liquid and bulk solid materials stored at the Site. A detailed summary of the updated container inventory and ERRS final field screening results in **Attachment B, Table 2**. No volumetric changes were noted at this time.

On December 13, 2013, START, EPA and OEPA representatives returned to the Site after OEPA had observed that the contents of some of the vats appeared to have been emptied and/or possibly transferred to other vats. Prior to this site visit OEPA had also noted that several of the vats had been moved for possible sale by the owner of the property. START and EPA took volumetric measurements, pH readings of all the vats and tanks in the building's interior (**Attachment B, Table 3**). A comparison of the volumetric measurements and pH readings with those taken in October 2013 indicated changes in either the volumetric measurements and/or pH readings in a number of the vats on site. Overall, START estimates that ~26,117 gallons are unaccounted for and may have been released to the environment prior to the December 13, 2013 site visit. START and EPA marked the vat/tank areas with caution tape and OEPA posted placards informing the owner that the vats and their contents were to remain undisturbed unless they received approval from OEPA.

This letter report serves as the final deliverable for this TDD. START does not anticipate any further activities under this TDD. If you have any questions or comments regarding the report or require additional copies, please contact me at (440) 202-2806.



Mr. Joe Fredle
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Sincerely,

WESTON SOLUTIONS, INC.

A handwritten signature in black ink, appearing to read "Michael S. Blair".

Michael S. Blair, C.P.G.

A handwritten signature in black ink, appearing to read "Frank L. Beodray".

Frank L. Beodray
WESTON START Project Manager

Attachments:

A – Figures

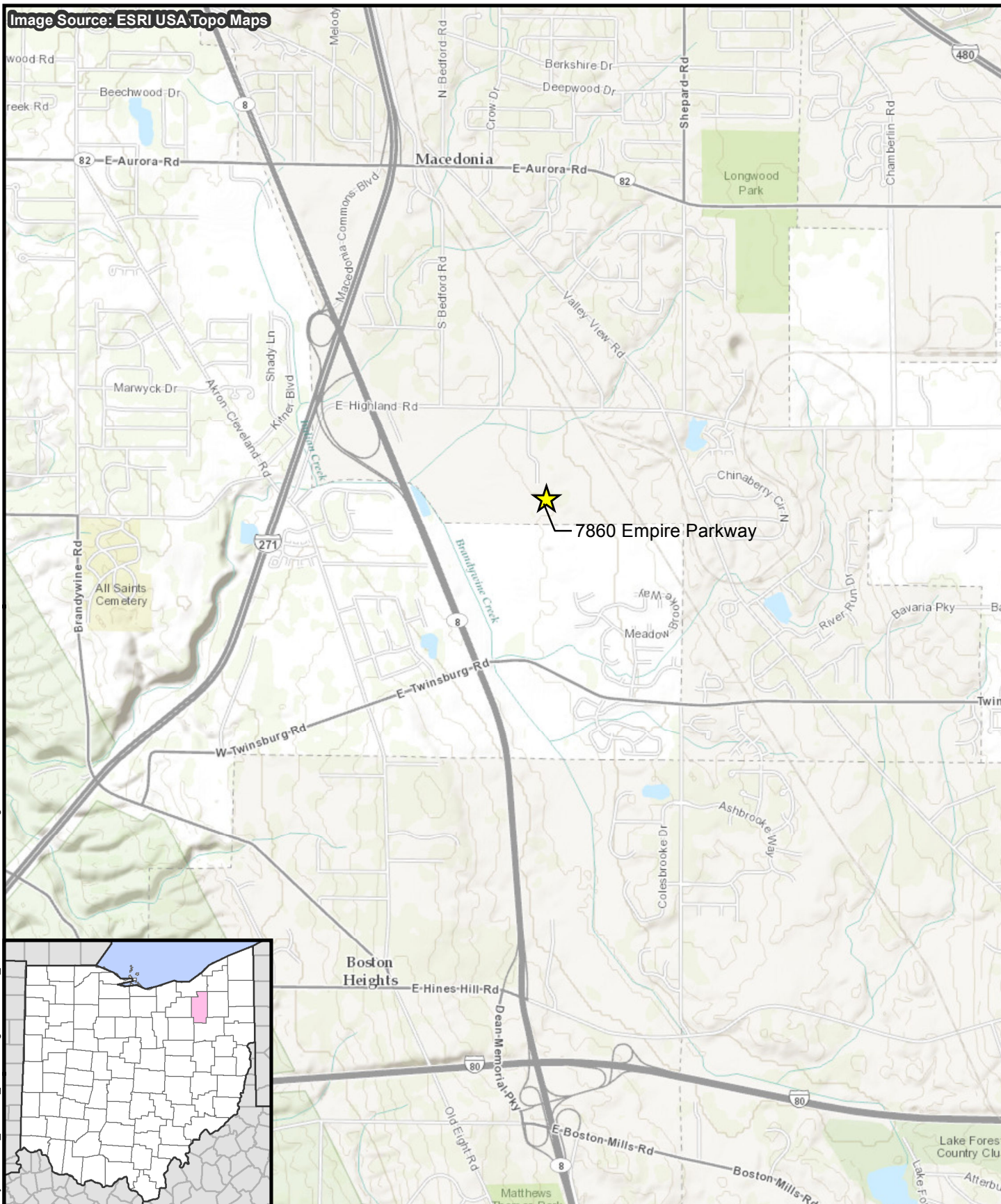
B – Tables

C – Photographic Documentation

cc: WESTON START DCN file

ATTACHMENT A
FIGURES

Image Source: ESRI USA Topo Maps



Legend



Site Location

0 4,000 Feet



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Figure 1
Site Location Map
Bedford Annodizing Site
Macedonia, Summit County, Ohio

Image Source: ESRI World Imagery

Empire Parkway

Railroad

Legend

- Site Boundary
- Parcel Boundaries

0 400 Feet



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Figure 2
Site Features Map
Bedford Annodizing Site
Macedonia, Summit County, Ohio

Image Source: ESRI World Imagery



Legend

- Grid Lines
- Site Boundary
- Parcel Boundaries

0 100 Feet

N



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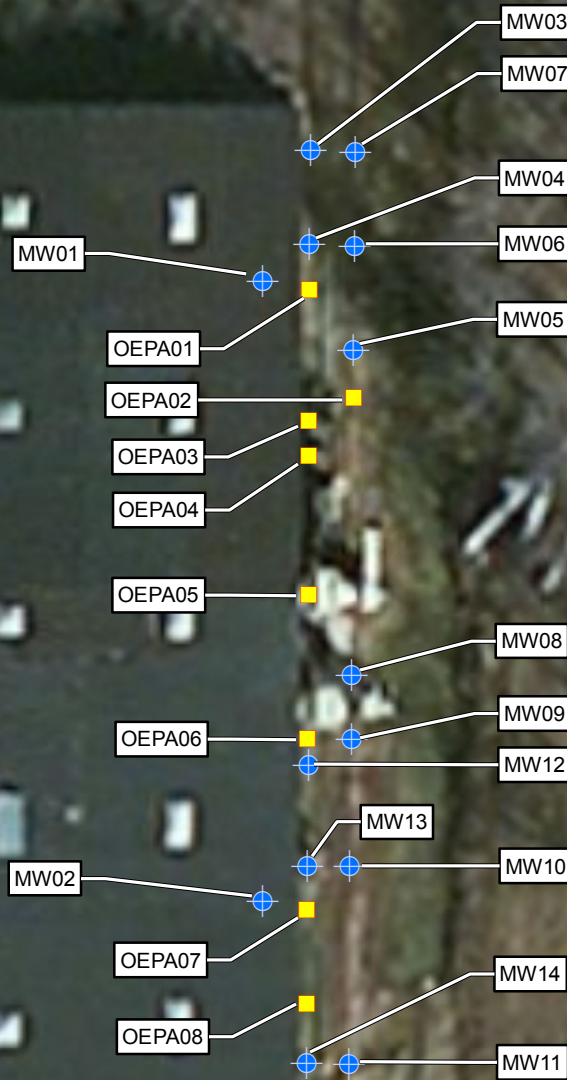


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Figure 3
Grid Layout Map
Bedford Annodizing Site
Macedonia, Summit County, Ohio

Image Source: ESRI World Imagery



Legend

- Temporary Wells
 - Ohio EPA Sumps
- 0 50 Feet
- N



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Figure 4

Temporary Well and Sump Locations
Bedford Annodizing Site
Macedonia, Summit County, Ohio

**ATTACHMENT B
TABLES**

Table 1- August 21, 2013
Container Volumetric Calculations
Bedford Anodizing Site Assessment
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
A1-2 and B1-2, second floor	-	various	1	-	-	-	Crate of various small containers	-	-	-	< pint size, some have labels
	-	Poly	1	7.4	55	-	Drum	-	-	-	empty
	-	Glass	1	0.1	1	Liquid	Sulfuric Acid	0.1	1	-	closed
	-	Glass	1	0.1	1	Liquid	Phosphoric Acid	0.1	1	-	closed
A1, B1, and C1, Maintenance Area	V88	Steel	1	128	957	Solid	Vat	64	479	11	50 % full of solid crystalline alkali waste
	-	-	60-80	-	-	-	light bulbs - fluorescent and incandescent	-	-	-	-
	-	various	10	-	-	-	various small containers	-	-	-	oils, lubricants, paint thinner
D1, E1 and D2, E2, Wastewater Treatment Area	-	Poly	1	0.7	5	Liquid	Open Oil Pan	0.1	1	-	approximately 1 gallon of used oil
	T01	Steel	1	311	2326	Liquid	Tank	-	-	-	unknown amount
	T02	Steel	1	269	2012	Both	Tank	231	1728	6.5	liquid 1' down with solid/sludge below
	T03	Steel	1	280	2094	Solid	Tank	245	1833	5	white crystalline alkali waste
	T04	Steel	1	96	718	Solid	Tank	80	598	5	white crystalline alkali waste
	T05	Poly	1	98	733	Both	Tank	79	591	9.5	liquid 1' down with solid/sludge below
	T06	Steel	1	308	2304	Liquid	Tank	231	1728	6	liquid 2' down
	T07	Steel	1	308	2304	Liquid	Tank	269	2012	7	liquid 1' down
	T08	Steel	1	269	2012	-	Tank	-	-	-	empty
	T09	Steel	1	88	658	-	Tank	-	-	-	empty
	T10	Steel	1	88	658	-	Tank	-	-	-	empty
	T11	Steel	1	34	254	Solid	Tank	24	180	9	white crystalline alkali waste 1' down
	T12	Steel	1	84	628	Solid	Tank	84	628	11.5	white crystalline alkali waste to top
	T13	Poly	1	198	1481	Solid	Tank	113	845	-	white crystalline alkali waste 3' down
	T14	Steel	1	-	250	Liquid	Tank	-	250	-	Appears Full
	T15	Poly	1	20	150	Liquid	Tank	17	127	6	liquid 0.5' down
	T16	Poly	1	-	2500	-	Tank	-	-	-	Corrosive Mixed Acids Labels - unknown amount
	T17	Steel	1	170	1272	-	Tank	-	-	-	Sludge Thickening Label - unknown amount
	T18	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
	T19	Poly	1	-	220	Both	Tank	-	55	14	labelled sulfuric acid 0.25 % full - liquid over solids
	T20	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
	T21	Poly	1	2280	17054	-	Tank	-	-	-	unknown contents and amount
F2	H01	Steel	1	20	150	Solid	Hopper	20	150	5.5	white crystalline waste to top
	H02	Steel	1	20	150	Solid	Hopper	20	150	6	white crystalline waste to top
G3	-	Poly	1	7.4	55	-	Drum	-	-	-	labelled Sodium Hydroxide Solution - empty
	-	Poly	2	7.4	55	-	Drum	-	-	-	labelled Total Etch 2050 - empty
	D02	Poly	3	7.4	55	Solid	Drum	22	165	11	no label - white crystalline waste
	D01	Poly	6	7.4	55	Liquid	Drum	44	330	10	no label - filled with unknown liquid
	-	-	-	-	-	-	Spill Area	-	-	14	Crystallized material on floor
G4	H03	Steel	1	20	150	Solid	Hopper	20	150	-	white crystalline waste to top
	-	Poly	1	7.4	55	Liquid	Drum	3.7	28	-	Corrosive label - half full of liquid
	-	Poly	1	0.7	5	Liquid	Small Container	0.5	4	-	no label - 75% full
F4	T22	Poly	1	44	330	Liquid	Tank	44	330	-	labelled sulfuric acid - 2 inches total liquid
	V01	Steel	1	88	658	-	Vat	-	-	-	Filled with Trash and Debris
G5	T23	Poly	1	-	-	-	Tank	-	-	-	sulfuric acid tote - empty
	T24	Poly	1	402	3007	Liquid	Tank	251	1877	-	liquid 3' down
	-	Poly	1	7.4	55	-	Drum	-	-	-	labelled Ammonia Solutions
	-	Fiber	2	0.1	5	-	Small Container	-	-	-	empty
G7 and H7	-	Poly	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	Poly	1	7.4	55	Solid	Drum	-	-	11	White Crystalline Solid Waste Spilled on floor
	-	Poly	1	7.4	55	Both	Drum	5.5	41	-	solid with 2 inches of liquid 75% full
	V03	Steel	1	567	4241	Liquid	Vat	473	3538	-	labelled Spent Acid - greenish liquid 1' from top
	V04	Steel	1	567	4241	Liquid	Vat	474	3546	0.5	labelled Spent Acid - greenish liquid 1' from top
	T27	Poly	1	-	3900	Liquid	Tank	-	3900	-	Full
	T28	Poly	1	346	2588	Liquid	Tank	173	1294	-	labelled Spent Acid - 50 % Full
G7	V02	Steel	1	675	5049	Both	Vat	338	2528	-	liquid on top of solid - liquid 3' from top
F7	T26	Poly	1	-	1700	Liquid	Tank	-	1700	-	Full
	T25	Poly	1	-	1700	Liquid	Tank	-	1700	-	Full

Table 1- August 21, 2013
Container Volumetric Calculations
Bedford Anodizing Site Assessment
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
H8	-	-	-	-	-	-	Trench Liquid	-	-	4.5	
	T29	Poly	1	13.4	100	Liquid	Tank	2	15	-	<25% full
	T30	Poly	1	88	658	Liquid	Tank	22	165	-	25 % full
	-	Steel	3	7.4	55	Liquid	Drum	22	165	-	labelled used oil
	-	Steel	1	7.4	55	Liquid	Drum	7.4	55	-	empty
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Nova Rinse
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Nitric Acid
G8	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	no label - unkown contents
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Sodium Hydroxide
	-	-	11	-	-	Solid	50 lb. bags	-	-	-	labelled Sulfamic Acid Crystals
	T31	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
	V05	Steel	1	675	5049	Solid	Vat	563	4211	-	solid white Alkali Waste 1' from top
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Naphtenic Oil
	-	Poly	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Ammonium Hydroxide
	-	Poly	1	0.1	5	Liquid	Small Container	0.1	5	-	labelled Polyacrylimide Emulsion
	-	Poly	1	0.1	5	Liquid	Small Container	-	-	-	labelled Polyacrylimide Emulsion - empty
	-	Poly	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Ammonia
	-	Stainless Steel	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Nitric Acid
	-	Fiber	1	2.7	20	Solid	Drum	2.7	20	-	labelled Inorganic Phosphate
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal MS
	-	Poly	1	0.1	5	Liquid	Small Container	0.1	5	-	no label
G9	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	no label
	-	Fiber	1	7.4	55	Solid	Drum	7.4	55	-	no label
	-	various	60	-	-	-	various small containers	-	-	-	lab chemicals up to 5 gallon containers
	-	Poly	1	7.4	55	Liquid	Drum	3.7	28	-	no label
	-	Fiber	1	4	30	Solid	Drum	4	30	-	labelled Cation Exchange Resin
	-	Poly	3	7.4	55	Liquid	Drum	22	165	-	labelled SC225 Detergent
	-	Poly	2	0.1	5	Solid	Overpack	0.2	10	-	labelled F2986
	-	Poly	1	0.1	5	Solid	Overpack	0.1	5	-	labelled Nickel Acetate
H11	-	Poly	1	0.1	5	Solid	Overpack	0.1	5	-	Red Powder
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Oakite Aluminum Cleaner
Outside behind H11	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Rust Stripper Sodium Hydroxide
	T32	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
	T33	Poly	1	-	50	Solid	Tank	-	50	-	goldish brown - Full
F5	V06	Steel	1	32	239	Liquid	Vat	8	60	-	labelled Passivate Tank - elevated VOCs, 25% full
	V49	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	V50	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	T45	Poly	1	-	-	-	Tank	-	-	-	Filled with Trash and Debris
	-	Poly	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Anodal ES1
F6	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Aqua Ammonia
	-	Poly	1	4	30	Liquid	Drum	2	15	-	labelled Acetic glacial
F7	-	Fiber	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	-	1	-	-	-	Cylinder	-	-	-	unknown contents
	-	Poly	3	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	various	10	-	-	-	various small containers	-	-	-	cleaning products
F7 and E7	-	Poly	4	7.4	55	Solid	Drum	30	220	-	solid white crystalline waste
	T34	Poly	1	137	1025	Liquid	Tank	98	733	-	liquid 2' from top
	T35	Poly	1	137	1025	Liquid	Tank	108	808	-	liquid 1.5' from top
E7	T36	Poly	1	402	3007	Liquid	Tank	351	2625	-	labelled Spent Acid - liquid 1' from top
	T37	Steel	1	402	3007	Liquid	Tank	302	2259	-	labelled Spent Acid - liquid 2' from top
	V07	Steel	1	648	4847	Liquid	Vat	540	4039	-	liquid 1' from top
	V08	Steel	1	180	1346	Liquid	Vat	113	845	13	liquid 1.5' from top
	V09	Steel	1	234	1750	Liquid	Vat	156	1167	11	liquid 2' from top
	D13	Poly	3	7.4	55	Both	Drum	22	165	11	no labels - solids with liquids on top
	T38	Poly	1	269	2012	Liquid	Tank	192	1436	-	labelled Spent Alkali - liquid 2' from top
D7 and E7	V10	Poly	1	675	5049	Both	Vat	506	3785	13.5	liquid 1.5' from top, solid 2' below liquid
	V11	Steel	1	525	3927	Liquid	Vat	438	3276	4	liquid 1' from top

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Macedonia, Summit County, Ohio

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D7	T39	Poly	1	170	1272	Both	Tank	127	950	-	labelled Spent Alkali - liquid 1.5' from top
	T40	Poly	1	192	1436	Both	Tank	135	1010	11	labelled Spent Alkali - liquid 1.5' from top
F8	V12	Steel	1	614	4593	Liquid	Vat	520	3890	12.5	liquid 1' from top
	D11	Poly	47	7.4	55	Solid	Drum	221	2585	13.5	solid white crystalline waste
	D12	-	-	-	-	-	Drum	-	-	11	solid white crystalline waste
	-	Steel	2	7.4	55	-	Drum	-	-	-	empty
	V13	Steel	1	96	718	Solid	Vat	72	539	10.5	labelled Treated Alkali - solids 1' from top
E8	V14	Steel	1	96	718	Solid	Vat	72	539	10	labelled Treated Alkali - solids 1' from top
	V15	Steel	1	128	957	Solid	Vat	96	718	5.5	labelled Treated Alkali - solids 1' from top
	T41	Poly	1	13	97	-	Tank	-	-	-	empty
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	no label
	-	Poly	1	4	30	Liquid	Drum	4	30	-	labelled Acetic Acid glacial
F9	V16	Steel	1	160	1197	Solid	Vat	120	898	5.5	white crystalline solid waste 1' from top
	V17	Steel	1	96	718	Solid	Vat	72	539	6	white crystalline solid waste 1' from top
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal
F10	D14	Poly	12	7.4	55	Solid	Drum	88.8	660	13	solid white crystalline waste
F11	D15	-	-	-	-	-	Drum	-	-	12	solid white crystalline waste
	-	Fiber	1	0.1	5	Solid	Drum	0.1	5	-	yellow powder
C10, D10, and E10	-	Poly	1	7.4	55	-	Drum	-	-	-	empty
	-	Poly	9	0.6	5	Liquid	Small Container	6	45	-	Sulfuric Acid for Color Bath label
	-	various	16	0.6	5	Liquid	Small Container	-	-	-	3 Aluminum Cleaner, 4 Lubricants, 2 Roof Coating
	-	Steel	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	various	3	-	-	-	Small Container	-	-	-	
	D03	Poly	72	7.4	55	Solid	Drum	532	3960	13	solid white crystalline waste
	D04	Poly	-	-	-	-	Drum	-	-	12.5	solid white crystalline waste
	D05	Poly	-	-	-	-	Drum	-	-	11	solid white crystalline waste
	D06	Poly	-	-	-	-	Drum	-	-	11	solid white crystalline waste
	D07	Poly	-	-	-	-	Drum	-	-	2.5	solid white crystalline waste
C8, D8, E8 and C9, D9, E9 Metal Fab Shop	D08	Poly	-	-	-	-	Drum	-	-	13	solid white crystalline waste
	D09	Poly	-	-	-	-	Drum	-	-	10.5	solid white crystalline waste
	D10	Poly	-	-	-	-	Drum	-	-	10.5	solid white crystalline waste
	-	-	1	-	-	-	Cylinder	-	-	-	refridgerant
	-	Steel	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
A8, B8, and C8	-	Poly	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	Steel	6	0.4	3	Liquid	Small Container	2.4	18	-	lubricant
A6, B6, C6 and A7, B7, C7	-	Poly	1	0.6	5	Solid	Small Container	0.6	5	-	buffing compound
	-	Steel	2	7.4	55	Solid	Drum	15	110	-	used buffing compound
	-	Steel	8	0.6	5	-	Small Container	-	-	-	empty
	-	Poly	1	7.4	55	Solid	Drum	7.4	55	-	used buffing compound
	-	Poly	1	7.4	55	Solid	Drum	7.4	55	-	used buffing compound
	-	Poly	2	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	Fiber	2	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris
	-	Poly	6	7.4	55	Solid	Drum	44	330	-	solid white crystalline waste
	V18	Steel	1	96	718	Solid	Vat	72	539	5.5	white crystalline solid waste 1' from top
	-	-	3	-	-	-	Cylinder	-	-	-	Argon Gas
	-	-	1	-	-	-	Cylinder	-	-	-	Oxygen Gas
C4	-	Steel	50	-	-	Liquid	Small Container	-	-	-	various aerosols and paints

Table 1- August 21, 2013
Container Volumetric Calculations
Bedford Anodizing Site Assessment
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
G3 - G8 and H3 - H8	-	-	1	-	-	-	Cylinder	-	-	-	Helium Gas
	-	-	1	1.3	10	Liquid	Small Container	1.3	10	-	Parts Washing Solvent
	-	various	20	-	-	-	Small Container	-	-	-	various cleaners
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Aluminum Etch
	V19	Steel	1	840	6283	Liquid	Vat	-	-	-	ERRS was pumping liquid into vat
	V20	Steel	1	840	6283	Both	Vat	720	5386	13.5	liquid 1' from top - solids 3' from top
	V21	Steel	1	630	4712	Both	Vat	450	3366	14	liquid 3' from top, solid 2' below liquid
	V22	Steel	1	630	4712	Solid	Vat	630	4712	11	white crystalline alkali solid waste
	V23	Steel	1	630	4712	Solid	Vat	630	4712	11	white crystalline alkali solid waste
	V24	Steel	1	630	4712	Both	Vat	540	4039	14	solid 1' from top of liquid
	V25	Steel	1	630	4712	Liquid	Vat	540	4039	13.5	liquid 1' from top
	V26	Steel	1	630	4712	Liquid	Vat	540	4039	13	liquid 1' from top
	V27	Steel	1	525	3927	Liquid	Vat	450	3366	12.5	liquid 1' from top
	V28	Steel	1	735	5498	Liquid	Vat	630	4712	12	liquid 1' from top
	V29	Steel	1	735	5498	Liquid	Vat	630	4712	11	liquid 1' from top
	V30	Steel	1	840	6283	Liquid	Vat	480	3590	1.5	Vat was leaking onto floor liquid 3' from top
	V31	Steel	1	840	6283	Liquid	Vat	480	3590	1.5	liquid 3' from top
	V32	Steel	1	840	6283	Liquid	Vat	720	5386	1.5	liquid 1' from top
	V33	Steel	1	840	6283	Liquid	Vat	480	3590	1.5	liquid 3' from top
	V34	Steel	1	100	748	Liquid	Vat	80	598	1.5	liquid 1' from top
	V35	Steel	1	840	6283	Liquid	Vat	660	4937	1.5	liquid 1.5' from top
	V36	Steel	1	735	5498	Liquid	Vat	630	4712	1.5	liquid 1' from top
	V37	Steel	1	735	5498	-	Vat	-	-	-	nearly empty
	V38	Steel	1	438	3276	Liquid	Vat	375	2805	4	liquid 1' from top
	V39	Steel	1	630	4712	-	Vat	-	-	-	nearly empty
	V40	Steel	1	735	5498	Liquid	Vat	420	3142	3.5	liquid 3' from top
	V41	Steel	1	735	5498	-	Vat	-	-	-	nearly empty
	V42	Steel	1	735	5498	Liquid	Vat	525	3927	5.5	liquid 2' from top
	V43	Steel	1	630	4712	Liquid	Vat	540	4039	3.5	liquid 1' from top
	V44	Steel	1	630	4712	Liquid	Vat	540	4039	10	liquid 1' from top
A9, A10, A11 and B9, B10, B11	V45	Steel	1	840	6283	Liquid	Vat	720	5386	2	liquid 1' from top
	V46	Steel	1	735	5498	Liquid	Vat	630	4712	2	liquid 1' from top
	V47	Steel	1	735	5498	Liquid	Vat	630	4712	1.5	liquid 1' from top
Outside B11 South	V48	Steel	1	840	6283	-	Vat	-	-	-	nearly empty

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Container Volumetric Calculations
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Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
Outside West Canopy	T42	Fiberglass	1	-	-	-	Tank	-	-	-	air stripper - empty
	T43	Fiberglass	1	-	-	-	Tank	-	-	-	air stripper - empty
	-	Steel	67	0.6	5	Liquid	Small Container	-	-	-	various levels of contents - heavy duty lubricant
	-	Steel	12	0.1	1	Liquid	Small Container	-	-	-	various levels of contents - paint
	T44	Fiberglass	1	1571	11751	-	Tank	-	-	-	contents unknown
	-	Steel	1	616	4607	Solid	Rolloff	616	4607	5	white crystalline alkali solid waste
	-	Poly	2	7.4	55	Liquid	Drum	-	-	-	appears to be rainwater collected
	T46	Poly	1	28	209	Liquid	Tank	28	209	6.5	Caustic Soda Label
	T47	Poly	1	28	209	-	Tank	-	-	-	Trash and Debris
	T48	Poly	1	28	209	-	Tank	-	-	-	Trash and Debris
	T49	Poly	1	28	209	-	Tank	-	-	-	Trash and Debris
	T50	Poly	1	15	112	-	Tank	-	-	-	empty
	T51	Poly	1	-	150	-	Tank	-	-	-	empty
	T52	Poly	1	63	471	-	Tank	-	-	-	empty
	T53	Poly	1	154	1152	-	Tank	-	-	-	empty
	T54	Poly	1	154	1152	-	Tank	-	-	-	empty
	T55	Poly	1	38	284	-	Tank	-	-	-	empty
	T56	Poly	1	28	209	solid	Tank	-	-	13	3 inches of solid crystalline material
	V52	Steel	1	240	1795	Solid	Vat	192	1436	5	solid white Alkali Waste 1' from top
	V53	Steel	1	160	1197	-	Vat	-	-	-	Filled with Trash and Debris
	V54	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top
	V55	Steel	1	128	957	Solid	Vat	96	718	5	solid white Alkali Waste 1' from top
	V56	Steel	1	385	2880	Solid	Vat	330	2468	5	Large Hopper - solid white Alkali Waste 1' from top
	V57	Steel	1	128	957	Solid	Vat	96	718	6	solid white Alkali Waste 1' from top
	V58	Steel	1	160	1197	-	Vat	-	-	-	Filled with Trash and Debris
	V59	Steel	1	120	898	-	Vat	-	-	-	empty
	V60	Steel	1	264	1975	Solid	Vat	216	1616	5	solid white Alkali Waste 1' from top
	V61	Steel	1	154	1152	Solid	Vat	116	868	5	solid white Alkali Waste 1' from top
	V62	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top
	V63	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top
	V64	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top
	V65	Steel	1	100	748	-	Vat	-	-	-	Filled with Trash and Debris
	V66	Steel	1	330	2468	Solid	Vat	281	2102	5	solid white Alkali Waste 1' from top
	V67	Steel	1	120	898	-	Vat	-	-	-	empty
	V68	Steel	1	80	598	Solid	Vat	60	449	5	solid white Alkali Waste 1' from top
	V69	Steel	1	135	1010	Solid	Vat	101	755	7.5	solid white Alkali Waste 1' from top
	V70	Steel	1	210	1571	-	Vat	-	-	-	empty
	V71	Steel	1	12	90	Liquid	Vat	6	45	5	liquid 1.5' from top
	V72	Steel	1	-	-	-	Vat	-	-	-	empty
	V73	Steel	1	-	-	-	Vat	-	-	-	empty
	V74	Steel	1	-	-	-	Vat	-	-	-	empty
	V75	Steel	1	-	-	-	Vat	-	-	-	empty
	V76	Steel	1	-	-	-	Vat	-	-	-	empty
	V77	Steel	1	28	209	-	Vat	-	-	-	Filled with Trash and Debris
	V78	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	V79	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	V80	Steel	1	-	-	-	Vat	-	-	-	empty
	V81	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	V82	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	V83	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	V84	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris
	V85	Poly	1	128	957	Liquid	Vat	16	120	5	Only 6" of liquid
	V86	Steel	1	-	-	-	Vat	-	-	-	J-shaped - empty
	V87	Steel	1	-	-	-	Vat	-	-	-	J-shaped - empty

Table 2- October 25, 2013
Container Inventory and Field Screening Results
Bedford Anodizing Tanks and Vats Site
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
A1-2 and B1-2 (Second Floor)	-	Various	1	-	-	-	Crate of various small containers	-	-	-	approximate pint size, some have labels
	-	Poly	1	7.4	55	-	Drum	-	-	-	empty
	-	Glass	1	0.1	1	Liquid	Glass jar	0.1	1	-	labelled Sulfuric Acid
	-	Glass	1	0.1	1	Liquid	Glass jar	0.1	1	-	labelled Phosphoric Acid
	-	Steel	2	-	-	-	Cylinder	-	-	-	labelled Propane
A1, B1, and C1 -C2 (Maintenance Area)	V88	Steel	1	128	957	Solid	Vat	64	479	11	50 % full of solid crystalline alkali waste
	-	-	60-80	-	-	-	Light bulbs - flourescent and incandescent	-	-	-	
	-	Various	10	-	-	-	Various small containers	-	-	-	oils, lubricants, paint thinners
	-	Poly	1	0.7		Liquid	Open oil pan	0.1	1	-	approximately 1 gallon of used oil
D1-2 and E1-2 (Wastewater Treatment Area)	T01	Steel	1	311	2326	Liquid	Tank	-	-	-	unknown amount / settling tank
	T02	Steel	1	269	2012	Both	Tank	231	1728	6.5	liquid 1' down with solid/sludge below / discharge tank
	T03	Steel	1	280	2094	Solid	Tank	245	1833	5	white crystalline alkali waste / clarifier tank
	T04	Steel	1	96	718	Solid	Tank	80	598	5	white crystalline alkali waste / polymer tank
	T05	Poly	1	98	733	Both	Tank	79	591	9.5	liquid 1' down with solid/sludge below / polymer tank
	T06	Steel	1	308	2304	Liquid	Tank	231	1728	6	liquid 2' down / neutralization tank
	T07	Steel	1	308	2304	Liquid	Tank	269	2012	7	liquid 1' down / neutralization tank
	T08	Steel	1	269	2012	-	Tank	-	-	-	empty / backup chromate treatment tank
	T09	Steel	1	88	658	-	Tank	-	-	-	empty / backup chromate treatment tank
	T10	Steel	1	88	658	-	Tank	-	-	-	empty / backup chromate treatment tank
	T11	Steel	1	34	254	Solid	Tank	24	180	9	white crystalline alkali waste 1' down / backup chromate treatment tank
	T12	Steel	1	84	628	Solid	Tank	84	628	11.5	white crystalline alkali waste to top / backup chromate treatment tank
	T13	Poly	1	198	1481	Solid	Tank	113	845	-	white crystalline alkali waste 3' down / backup chromate treatment tank
	T14	Steel	1	-	250	Liquid	Tank		250	-	appears full / rinse water tank
	T15	Poly	1	20	150	Liquid	Tank	17	127	6	liquid 0.5 ' down / rinse water tank
	T16	Poly	1	-	2500	-	Tank	-	-	-	labelled Corrosive Mixed Acids - unknown amount
	T17	Steel	1	170	1272	-	Tank	-	-	-	labelled Sludge Thickening - unknown amount
	T18	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
	T19	Poly	1	-	220	Both	Tank	-	55	14	labelled Sulfuric Acid 0.25 % full - liquid over solids
	T20	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
	T21	Poly	1	2280	17054	-	Tank	-	-	-	unknown contents and amount - appears empty / water recycling tank - never used
B4	H01	Steel	1	20	150	Solid	Hopper	20	150	5.5	white crystalline waste to top
	H02	Steel	1	20	150	Solid	Hopper	20	150	6	white crystalline waste to top
F2	-	Poly	1	7.4	55	-	Drum	-	-	-	empty - labelled Sodium Hydroxide Solution
G3	-	Poly	2	7.4	55	-	Drum	-	-	-	empty - labelled Total Etch 2050
	D02	Poly	3	7.4	55	Solid	Drum	22	165	11	no label - white crystalline waste
	D01	Poly	6	7.4	55	Liquid	Drum	44	330	10	no label - filled with unknown liquid
	-	-	-	-	-	-	Spill Area	-	-	14	crystallized material on floor
	H03	Steel	1	20	150	Solid	Hopper	20	150	-	white crystalline waste to top
	-	Poly	1	7.4	55	Liquid	Drum	3.7	28	-	labelled Corrosive - half full
G4	-	Poly	1	0.7	5	Liquid	Small Container	0.5	4	-	no label - 75% full
	T22	Poly	1	44	330	Liquid	Tank	44	330	-	labelled Sulfuric Acid - 2 inches total liquid
F4	V01	Steel	1	88	658	-	Vat	-	-	-	trash and debris
	T23	Poly	1	-	-	-	Tank	-	-	-	empty - labelled Sulfuric Acid
G5	T24	Poly	1	402	3007	Liquid	Tank	251	1877	-	no label - liquid 3' down / water holding tank / could contain some acid
	-	Poly	1	7.4	55	-	Drum	-	-	-	labelled Ammonia Solutions
	-	Fiber	2	0.1	5	-	Small Container	-	-	-	empty
G7 and H7	-	Poly	1	7.4	55	-	Drum	-	-	-	trash and debris
	-	Poly	1	7.4	55	Solid	Drum	-	-	11	white crystalline solid waste spilled on floor
	-	Poly	1	7.4	55	Both	Drum	5.5	41	-	solid with 2 inhes of liquid - 75% full
	V03	Steel	1	567	4241	Liquid	Vat	473	3538	-	labelled Spent Acid - greenish liquid 1' from top
	V04	Steel	1	567	4241	Liquid	Vat	474	3546	0.5	labelled Spent Acid - greenish liquid 1' from top
	T27	Poly	1	-	3900	Liquid	Tank	-	3900	-	full
	T28	Poly	1	346	2588	Liquid	Tank	173	1294	-	labelled Spent Acid - 50 % Full
G7 and F7	V02	Steel	1	675	5049	Both	Vat	338	2528	-	liquid on top of solid - liquid 3' from top / alkali rinse water
G7	T26	Poly	1	-	1700	Liquid	Tank	-	1700	-	full
F7	T25	Poly	1	-	1700	Liquid	Tank	-	1700	-	full
	-	-	-	-	-	-	Trench Liquid	-	-	4.5	
H8	T29	Poly	1	13.4	100	Liquid	Tank	2	15	-	<25% full
	T30	Poly	1	88	658	Liquid	Tank	22	165	-	25 % full
	-	Steel	3	7.4	55	Liquid	Drum	22	165	-	labelled Used Oil
	-	Steel	1	7.4	55	Liquid	Drum	7.4	55	-	empty
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Nova Rinse
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Nitric Acid
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	no label - unkown contents
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Sodium Hydroxide
	-	-	11	-	-	Solid	50 lb. bags	-	-	-	labelled Sulfamic Acid Crystals

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Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
G8	V05	Steel	1	675	5049	Solid	Vat	563	4211	-	solid white alkali waste - 1' from top
	T31	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Naphtenic Oil
	-	Poly	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Ammonium Hydroxide
	-	Poly	1	0.1	5	Liquid	Small Container	0.1	5	-	labelled Polyacrylimide Emulsion
	-	Poly	1	0.1	5	Liquid	Small Container	-	-	-	labelled Polyacrylimide Emulsion - empty
	-	Poly	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Ammonia
	-	Stainless Steel	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Nitric Acid
	-	Fiber	1	2.7	20	Solid	Drum	2.7	20	-	labelled Inorganic Phosphate
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal MS
	-	Poly	1	0.1	5	Liquid	Small Container	0.1	5	-	no label
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	no label
G9	-	Fiber	1	7.4	55	Solid	Drum	7.4	55	-	no label
	-	Various	60	-	-	-	various small containers	-	-	-	lab chemicals - up to 5 gallons each
	-	Poly	1	7.4	55	Liquid	Drum	3.7	28	-	no label
	-	Fiber	1	4	30	Solid	Drum	4	30	-	labelled Cation Exchange Resin
	-	Poly	3	7.4	55	Liquid	Drum	22	165	-	labelled SC225 Detergent
	-	Poly	2	0.1	5	Solid	Overpack	0.2	10	-	labelled F2986
	-	Poly	1	0.1	5	Solid	Overpack	0.1	5	-	labelled Nickel Acetate
	-	Poly	1	0.1	5	Solid	Overpack	0.1	5	-	red powder
H11	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Oakite Aluminum Cleaner
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Rust Stripper Sodium Hydroxide
	-	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS
Outside South Canopy	T32	Poly	1	-	-	-	Tank	-	-	-	goldish brown solid material - full
	T33	Poly	1	-	50	Solid	Tank	-	50	-	labelled Passivate Tank - elevated VOCs - 25% full
	V06	Steel	1	32	239	Liquid	Vat	8	60	-	trash and debris
	V49	Steel	1	-	-	-	Vat	-	-	-	trash and debris
	V50	Steel	1	-	-	-	Vat	-	-	-	empty
	V51	Poly	1	-	-	-	Vat	-	-	-	empty
F5	T45	Poly	1	-	-	-	Tank	-	-	-	empty
	-	Poly	1	7.4	55	-	Drum	-	-	-	trash and debris
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Anodal ES1
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Aqua Ammonia
	-	Poly	1	4	30	Liquid	Drum	2	15	-	labelled Acetic glacial
	-	Fiber	1	7.4	55	-	Drum	-	-	-	trash and debris
F6	-	-	1	-	-	-	Cylinder	-	-	-	unknown contents
	-	Poly	3	7.4	55	-	Drum	-	-	-	trash and debris
	-	Various	10	-	-	-	various small containers	-	-	-	various cleaning products
F7	-	Poly	4	7.4	55	Solid	Drum	30	220	-	solid white crystalline waste
	T34	Poly	1	137	1025	Liquid	Tank	98	733	-	liquid 2' from top
	T35	Poly	1	137	1025	Liquid	Tank	108	808	-	liquid 1.5' from top
	T36	Poly	1	402	3007	Liquid	Tank	351	2625	-	labelled Spent Acid - liquid 1' from top
	T37	Steel	1	402	3007	Liquid	Tank	302	2259	-	labelled Spent Acid - liquid 2' from top
F7 and E7	V07	Steel	1	648	4847	Liquid	Vat	540	4039	-	liquid 1' from top
	V08	Steel	1	180	1346	Liquid	Vat	113	845	13	liquid 1.5' from top
E7	D13	Poly	3	7.4	55	Both	Drum	22	165	11	no labels - solids with liquids on top
	V09	Steel	1	234	1750	Liquid	Vat	156	1167	11	liquid 2' from top
	T38	Poly	1	269	2012	Liquid	Tank	192	1436	-	labelled Spent Alkali - liquid 2' from top
	V10	Poly	1	675	5049	Both	Vat	506	3785	13.5	liquid 1.5' from top, solid 2' below liquid
	V11	Steel	1	525	3927	Liquid	Vat	438	3276	4	liquid 1' from top
	T39	Poly	1	170	1272	Both	Tank	127	950	-	labelled Spent Alkali - liquid 1.5' from top
	T40	Poly	1	192	1436	Both	Tank	135	1010	11	labelled Spent Alkali - liquid 1.5' from top
D7 and E7	V12	Steel	1	614	4593	Liquid	Vat	520	3890	12.5	liquid 1' from top
	D11	Poly	47	7.4	55	Solid	Drum	221	2585	13.5	solid white crystalline waste
	D12	-	-	-	-	-	Drum	-	-	11	solid white crystalline waste
D7	-	Steel	2	7.4	55	-	Drum	-	-	-	empty
	V13	Steel	1	96	718	Solid	Vat	72	539	10.5	labelled Treated Alkali - solids 1' from top
F8	V14	Steel	1	96	718	Solid	Vat	72	539	10	labelled Treated Alkali - solids 1' from top
	V15	Steel	1	128	957	Solid	Vat	96	718	5.5	labelled Treated Alkali - solids 1' from top
	T41	Poly	1	13	97	-	Tank	-	-	-	empty
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	no label
	-	Poly	1	4	30	Liquid	Drum	4	30	-	labelled Acetic Acid Glacial
E8	V16	Steel	1	160	1197	Solid	Vat	120	898	5.5	white crystalline solid waste 1' from top
	V17	Steel	1	96	718	Solid	Vat	72	539	6	white crystalline solid waste 1' from top
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal
	D14	Poly	12	7.4	55	Solid	Drum	88.8	660	13	solid white crystalline waste
	D15	-	-	-	-	-	Drum	-	-	12	solid white crystalline waste
F9	-	Fiber	1	0.1	5	Solid	Drum	0.1	5	-	yellow powder
	-	Poly	1	7.4	55	-	Drum	-	-	-	empty
	-	Poly	9	0.6	5	Liquid	Small Container	6	45	-	labelled Sulfuric Acid for Color Bath
F10	-	Various	16	0.6	5	Liquid	Small Container	-	-	-	3 Aluminum Cleaner, 4 Lubricants, 2 Roof Coating

Table 2- October 25, 2013
Container Inventory and Field Screening Results
Bedford Anodizing Tanks and Vats Site
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
F11	-	Steel	1	7.4	55	-	Drum	-	-	-	trash and debris
	-	Various	3	-	-	-	Small Container	-	-	-	various
C10, D10, and E10	D03	Poly	72	7.4	55	Solid	Drum	532	3960	13	solid white crystalline waste
	D04	Poly	-	-	-	-	Drum	-	-	12.5	solid white crystalline waste
	D05	Poly	-	-	-	-	Drum	-	-	11	solid white crystalline waste
	D06	Poly	-	-	-	-	Drum	-	-	11	solid white crystalline waste
	D07	Poly	-	-	-	-	Drum	-	-	2.5	solid white crystalline waste
	D08	Poly	-	-	-	-	Drum	-	-	13	solid white crystalline waste
	D09	Poly	-	-	-	-	Drum	-	-	10.5	solid white crystalline waste
	D10	Poly	-	-	-	-	Drum	-	-	10.5	solid white crystalline waste
	-	-	1	-	-	-	Cylinder	-	-	-	refridgerant
	-	Steel	1	7.4	55	-	Drum	-	-	-	trash and debris
C8-9, D8-9, and E8-9 (Metal Fab Shop)	-	Poly	1	7.4	55	-	Drum	-	-	-	trash and debris
	-	Steel	6	0.4	3	Liquid	Small Container	2.4	18	-	lubricant
	-	Poly	1	0.6	5	Solid	Small Container	0.6	5	-	buffing compound
	-	Steel	2	7.4	55	Solid	Drum	15	110	-	used buffing compound
	-	Steel	8	0.6	5	-	Small Container	-	-	-	empty
	-	-	-	-	-	-	-	-	-	-	-
A8, B8, and C8	-	Poly	1	7.4	55	Solid	Drum	7.4	55	-	used buffing compound
	-	Poly	1	7.4	55	Solid	Drum	7.4	55	-	used buffing compound
A6-7, B6-7, and C6-7	-	Poly	2	7.4	55	-	Drum	-	-	-	trash and debris
	-	Fiber	2	7.4	55	-	Drum	-	-	-	trash and debris
	-	Poly	6	7.4	55	Solid	Drum	44	330	-	solid white crystalline waste
	V18	Steel	1	96	718	Solid	Vat	72	539	5.5	white crystaline solid waste 1' from top
	-	-	3	-	-	-	Cylinder	-	-	-	labelled Argon
	-	-	1	-	-	-	Cylinder	-	-	-	labelled Oxygen
	-	Steel	50	-	-	Liquid	Small Container	-	-	-	various aerosols and paints
	-	-	1	-	-	-	Cylinder	-	-	-	labelled Helium
	-	-	1	1.3	10	Liquid	Small Container	1.3	10	-	Parts Washing Solvent
	-	Various	20	-	-	-	Small Container	-	-	-	various cleaners
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal
C4	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Aluminum Etch
	V19	Steel	1	840	6283	Liquid	Vat	-	-	-	ERRS was pumping liquid into vat / lalkalyn non-etch cleaner - now probably
G3-8 and H3-8	V20	Steel	1	840	6283	Both	Vat	720	5386	13.5	liquid 1' from top - solid 2' below liquid / catch all for rinse - sodium and aluminum hydroxide
	V21	Steel	1	630	4712	Both	Vat	450	3366	14	liquid 3' from top - solid 2' below liquid / sodium and aluminum hydroxide
	V22	Steel	1	630	4712	Solid	Vat	630	4712	11	white crystaline alkali solid waste / aluminum hydroxide
	V23	Steel	1	630	4712	Solid	Vat	630	4712	11	white crystaline alkali solid waste / aluminum hydroxide
	V24	Steel	1	630	4712	Both	Vat	540	4039	14	liquid 1' from top - solid 1' below liquid / alkali rinse and aluminum hydroxide
	V25	Steel	1	630	4712	Liquid	Vat	540	4039	13.5	liquid 1' from top / alkali rinse
	V26	Steel	1	630	4712	Liquid	Vat	540	4039	13	liquid 1' from top / alkali rinse
	V27	Steel	1	525	3927	Liquid	Vat	450	3366	12.5	liquid 1' from top / former bright dip tank / alkali rinse / sludge could contain nitric acid
	V28	Steel	1	735	5498	Liquid	Vat	630	4712	12	liquid 1' from top / alkali rinse
	V29	Steel	1	735	5498	Liquid	Vat	630	4712	11	liquid 1' from top / alkali rinse
	V30	Steel	1	840	6283	Liquid	Vat	480	3590	1.5	Vat was leaking onto floor liquid 3' from top / 16% sulfuric acid
	V31	Steel	1	840	6283	Liquid	Vat	480	3590	1.5	liquid 3' from top / sulfuric acid
	V32	Steel	1	840	6283	Liquid	Vat	720	5386	1.5	liquid 1' from top / sulfuric acid
	V33	Steel	1	840	6283	Liquid	Vat	480	3590	1.5	liquid 3' from top / sulfuric acid
	V34	Steel	1	100	748	Liquid	Vat	80	598	1.5	liquid 1' from top / smaller vat inside containing blue dye
	V35	Steel	1	840	6283	Liquid	Vat	660	4937	1.5	liquid 1.5' from top / acid base with tin (stanosulfate)
	V36	Steel	1	735	5498	Liquid	Vat	630	4712	1.5	liquid 1' from top / sulfuric acid and water
	V37	Steel	1	735	5498	-	Vat	-	-	-	nearly empty / sulfuric acid and water
	V38	Steel	1	438	3276	Liquid	Vat	375	2805	4	liquid 1' from top / brown dye
	V39	Steel	1	630	4712	-	Vat	-	-	-	nearly empty / sulfuric acid and water
	V40	Steel	1	735	5498	Liquid	Vat	420	3142	3.5	liquid 3' from top / sulfuric acid and water
	V41	Steel	1	735	5498	-	Vat	-	-	-	nearly empty / sulfuric acid and water
	V42	Steel	1	735	5498	Liquid	Vat	525	3927	5.5	liquid 2' from top / magnesium based seal (ES-1 Seal)
	V43	Steel	1	630	4712	Liquid	Vat	540	4039	3.5	liquid 1' from top / water rinse
	V44	Steel	1	630	4712	Liquid	Vat	540	4039	10	liquid 1' from top / ferric ammonium oxilate (gold dye)
	V45	Steel	1	840	6283	Liquid	Vat	720	5386	2	liquid 1' from top / black dye mixed with sulfuric acid
	V46	Steel	1	735	5498	Liquid	Vat	630	4712	2	liquid 1' from top / black dye mixed with sulfuric acid
	V47	Steel	1	735	5498	Liquid	Vat	630	4712	1.5	liquid 1' from top / acid and water
	V48	Steel	1	840	6283	-	Vat	-	-	-	nearly empty / acid and water
A9-11 and B9-11	T42	Fiberglass	1	-	-	-	Tank	-	-	-	air stripper tower section - empty
	T43	Fiberglass	1	-	-	-	Tank	-	-	-	air stripper tower section - empty
	-	Steel	67	0.6	5	Liquid	Small Container	-	-	-	various levels of contents - heavy duty lubricant
	-	Steel	12	0.1	1	Liquid	Small Container	-	-	-	various levels of contents - paint

Table 2- October 25, 2013
Container Inventory and Field Screening Results
Bedford Anodizing Tanks and Vats Site
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments
South of Building	T44	Fiberglass	1	1571	11751	-	Tank	-	-	-	contents unknown
	-	Steel	1	616	4607	Solid	Rolloff	616	4607	5	white crystalline alkali solid waste / Rolloff 2153
Equipment Storage Pad	-	Poly	2	7.4	55	Liquid	Drum	-	-	-	appears to be rainwater collected
	T46	Poly	1	28	209	Liquid	Tank	28	209	6.5	labelled Caustic Soda
	T47	Poly	1	28	209	-	Tank	-	-	-	trash and debris
	T48	Poly	1	28	209	-	Tank	-	-	-	trash and debris
	T49	Poly	1	28	209	-	Tank	-	-	-	trash and debris
	T50	Poly	1	15	112	-	Tank	-	-	-	empty
	T51	Poly	1	-	150	-	Tank	-	-	-	empty
	T52	Poly	1	63	471	-	Tank	-	-	-	empty
	T53	Poly	1	154	1152	-	Tank	-	-	-	empty
	T54	Poly	1	154	1152	-	Tank	-	-	-	empty
	T55	Poly	1	38	284	-	Tank	-	-	-	empty
	T56	Poly	1	28	209	solid	Tank	-	-	13	3 inches of solid crystalline material
	V52	Steel	1	240	1795	Solid	Vat	192	1436	5	solid white alkali waste 1' from top
	V53	Steel	1	160	1197	-	Vat	-	-	-	trash and debris
	V54	Steel	1	160	1197	Solid	Vat	120	898	5	solid white alkali waste 1' from top
	V55	Steel	1	128	957	Solid	Vat	96	718	5	solid white alkali waste 1' from top
	V56	Steel	1	385	2880	Solid	Vat	330	2468	5	large hopper - solid white alkali waste 1' from top
	V57	Steel	1	128	957	Solid	Vat	96	718	6	solid white alkali waste 1' from top
	V58	Steel	1	160	1197	-	Vat	-	-	-	trash and debris
	V59	Steel	1	120	898	-	Vat	-	-	-	empty
	V60	Steel	1	264	1975	Solid	Vat	216	1616	5	solid white alkali waste 1' from top
	V61	Steel	1	154	1152	Solid	Vat	116	868	5	solid white alkali waste 1' from top
	V62	Steel	1	160	1197	Solid	Vat	120	898	5	solid white alkali waste 1' from top
	V63	Steel	1	160	1197	Solid	Vat	120	898	5	solid white alkali waste 1' from top
	V64	Steel	1	160	1197	Solid	Vat	120	898	5	solid white alkali waste 1' from top
	V65	Steel	1	100	748	-	Vat	-	-	-	trash and debris
	V66	Steel	1	330	2468	Solid	Vat	281	2102	5	solid white alkali waste 1' from top
	V67	Steel	1	120	898	-	Vat	-	-	-	empty
	V68	Steel	1	80	598	Solid	Vat	60	449	5	solid white alkali waste 1' from top
	V69	Steel	1	135	1010	Solid	Vat	101	755	7.5	solid white alkali waste 1' from top
	V70	Steel	1	210	1571	-	Vat	-	-	-	empty
	V71	Steel	1	12	90	Liquid	Vat	6	45	5	liquid 1.5' from top
	V72	Steel	1	-	-	-	Vat	-	-	-	empty
	V73	Steel	1	-	-	-	Vat	-	-	-	empty
	V74	Steel	1	-	-	-	Vat	-	-	-	empty
	V75	Steel	1	-	-	-	Vat	-	-	-	empty
	V76	Steel	1	-	-	-	Vat	-	-	-	empty
	V77	Steel	1	28	209	-	Vat	-	-	-	trash and debris
	V78	Steel	1	-	-	-	Vat	-	-	-	trash and debris
	V79	Steel	1	-	-	-	Vat	-	-	-	trash and debris
	V80	Steel	1	-	-	-	Vat	-	-	-	empty
	V81	Steel	1	-	-	-	Vat	-	-	-	trash and debris
	V82	Steel	1	-	-	-	Vat	-	-	-	trash and debris
	V83	Steel	1	-	-	-	Vat	-	-	-	trash and debris
	V84	Steel	1	-	-	-	Vat	-	-	-	trash and debris
	V85	Poly	1	128	957	Liquid	Vat	16	120	5	approx. 0.5' of liquid
	V86	Steel	1	-	-	-	Vat	-	-	-	J-shaped - empty
	V87	Steel	1	-	-	-	Vat	-	-	-	J-shaped - empty

Table 3- December 13, 2013
Container Volumetric Calculations
Bedford Anodizing Site Assessment
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments	Volumetric change since 10/25/13 (gallons)
A1-2 and B1-2, second floor	-	various	1	-	-	-	Crate of various small containers	-	-	-	< pint size, some have labels	
	-	Poly	1	7.4	55	-	Drum	-	-	-	empty	
	-	Glass	1	0.1	1	Liquid	Sulfuric Acid	0.1	1	-	closed	
	-	Glass	1	0.1	1	Liquid	Phosphoric Acid	0.1	1	-	closed	
A1, B1, and C1, Maintenance Area	-	-	60-80	-	-	-	light bulbs - fluorescent and incandescent	-	-	-		
	-	various	10	-	-	-	various small containers	-	-	-	oils, lubricants, paint thinner	
	-	Poly	1	0.7	5	Liquid	Open Oil Pan	0.1	1	-	approximately 1 gallon of used oil	
D1, E1 and D2, E2, Wastewater Treatment Area	T01	Steel	1	311	2326	Liquid	Tank	292.36	2187	-	8"from top, frozen white sludge	
	T02	Steel	1	269	2012	Both	Tank	218.2	1632	8	16" from top, frozen liquid over white sludge	
	T03	Steel	1	280	2094	Liquid	Tank	236.25	1767	-	15" from top, frozen orange liquid	
	T04	Steel	1	96	718	Liquid	Tank	55.36	414	6	30.5" from top, frozen clear liquid	
	T05	Poly	1	98	733	Liquid	Tank	45.75	342	9.5	32" from top, frozen white sludge	
	T06	Steel	1	308	2304	Liquid	Tank	221.28	1655	6	27" from top, brown frozen liquid	
	T07	Steel	1	308	2304	Liquid	Tank	269	2012	7	12" from top, brown frozen liquid	
	T08	Steel	1	269	2012	Liquid	Tank	205	1533	9	20" from top, frozen clear liquid	
	T09	Steel	1	88	658	Liquid	Tank	51.3	384	5	35" from top, frozen clear liquid	
	T10	Steel	1	88	658	Liquid	Tank	53.4	399	4	33" from top, frozen clear liquid	
	T11	Steel	1	34	254	Solid	Tank	24	180	9	white crystalline alkali waste 1' down	
	T12	Steel	1	84	628	Solid	Tank	84	628	11.5	white crystalline alkali waste to top	
	T13	Poly	1	198	1481	Solid	Tank	113	845	-	white crystalline alkali waste 3' down	
	T14	Steel	1	-	250	Liquid	Tank		250	8	20" from top, frozen clear liquid	
	T15	Poly	1	20	150	Liquid	Tank	17	127	6	liquid 0.5 ' down	
	T16	Poly	1	-	2500	Both	Tank	-	-	3	30" from top, 8" clear liquid over white sludge	
	T17	Steel	1	170	1272	Liquid	Tank	127.2	951	3.5	18" from top, frozen clear liquid	
	T18	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS	
	T19	Poly	1	-	220	Both	Tank	-	55	14	labelled sulfuric acid0.25 % full - liquid over solids	
	T20	Poly	1	-	-	-	Tank	-	-	-	empty - used by ERRS	
	T21	Poly	1	2280	17054	-	Tank	-	-	-	unknown contents and amount	
	H01	Steel	1	20	150	Solid	Hopper	20	150	5.5	white crystalline waste to top	
	H02	Steel	1	20	150	Solid	Hopper	20	150	6	white crystalline waste to top	
F2	-	Poly	1	7.4	55	-	Drum	-	-	-	labelled Sodium Hydroxide Solution - empty	
G3	-	Poly	2	7.4	55	-	Drum	-	-	-	labelled Total Etch 2050 - empty	
	D02	Poly	3	7.4	55	Solid	Drum	22	165	11	no label - white crystalline waste	
	D01	Poly	6	7.4	55	Liquid	Drum	44	330	10	no label - filled with unknown liquid	
	-	-	-	-	-	-	Spill Area	-	-	14	Crystallized material on floor	
	H03	Steel	1	20	150	Solid	Hopper	20	150	-	white crystalline waste to top	
G4	-	Poly	1	7.4	55	Liquid	Drum	3.7	28	-	Corrosive label - half full of liquid	
	-	Poly	1	0.7	5	Liquid	Small Container	0.5	4	-	no label - 75% full	
	T22	Poly	1	44	330	Liquid	Tank	44	330	-	labelled sulfuric acid - 2 inches total liquid	
F4	V01	Steel	1	88	658	-	Vat	-	-	-	Filled with Trash and Debris	
	T23	Poly	1	-	-	-	Tank	-	-	-	sulfuric acid tote - empty	
G5	T24	Poly	1	402	3007	Liquid	Tank	50.27	376	1	Blue clear liquid 7' from top of hole	-1501
	-	Poly	1	7.4	55	-	Drum	-	-	-	labelled Ammonia Solutions	
	-	Fiber	2	0.1	5	-	Small Container	-	-	-	empty	
G7 and H7	-	Poly	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	Poly	1	7.4	55	Solid	Drum	-	-	11	White Crystalline Solid Waste Spilled on floor	
	-	Poly	1	7.4	55	Both	Drum	5.5	41	-	solid with 2 inhes of liquid 75% full	
	V03	Steel	1	567	4241	Liquid	Vat	425.25	3181	1	labelled Spent Acid - bluish clear liquid 18" from top	-353
	V04	Steel	1	567	4241	Liquid	Vat	474	3546	0.5	labelled Spent Acid - greenish liquid 1' from top	
	T27	Poly	1	-	3900	Liquid	Tank	-	3900	1	24" from top of manhole, black clear liquid	
	T28	Poly	1	346	2588	Liquid	Tank	185.9	1391	1	labelled Spent Acid - 50" from top of hole	

Table 3- December 13, 2013
Container Volumetric Calculations
Bedford Anodizing Site Assessment
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments	Volumetric change since 10/25/13 (gallons)
G7 and F7	V02	Steel	1	675	5049	Both	Vat	323.44	2419	14	1" liquid on top of white sludge - liquid 37.5" from top	
G7	T26	Poly	1	-	1700	Liquid	Tank	-	1700	9	Dark liquid 72" from top of manhole	
F7	T25	Poly	1	-	1700	Liquid	Tank	-	1700	13	Liquid 18" from top of opening, yellow liquid over white sludge	
	-	-	-	-	-	-	Trench Liquid	-	-	4.5		
H8	T30	Poly	1	88	658	Liquid	Tank	18.3	137	-	Frozen liquid 66.5" from top	
	-	Steel	3	7.4	55	Liquid	Drum	22	165	-	labelled used oil	
	-	Steel	1	7.4	55	Liquid	Drum	7.4	55	-	empty	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Nova Rinse	
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Nitric Acid	
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	no label - unkown contents	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Sodium Hydroxide	
	-	-	11	-	-	Solid	50 lb. bags	-	-	-	labelled Sulfamic Acid Crystals	
G8	V05	Steel	1	675	5049	Solid	Vat	675	5049	-	solid white Alkali Waste (full)	838
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Naphtenic Oil	
	-	Poly	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Ammonium Hydroxide	
	-	Poly	1	0.1	5	Liquid	Small Container	0.1	5	-	labelled Polyacrylimide Emulsion	
	-	Poly	1	0.1	5	Liquid	Small Container	-	-	-	labelled Polyacrylimide Emulsion - empty	
	-	Poly	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Ammonia	
	-	Stainless Steel	1	2.7	20	Liquid	Drum	2.7	20	-	labelled Nitric Acid	
	-	Fiber	1	2.7	20	Solid	Drum	2.7	20	-	labelled Inorganic Phosphate	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal MS	
	-	Poly	1	0.1	5	Liquid	Small Container	0.1	5	-	no label	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	no label	
	-	Fiber	1	7.4	55	Solid	Drum	7.4	55	-	no label	
G9	-	various	60	-	-	-	various small containers	-	-	-	lab chemicals up to 5 gallon containers	
	-	Poly	1	7.4	55	Liquid	Drum	3.7	28	-	no label	
	-	Fiber	1	4	30	Solid	Drum	4	30	-	labelled Cation Exchange Resin	
	-	Poly	3	7.4	55	Liquid	Drum	22	165	-	labelled SC225 Detergent	
	-	Poly	2	0.1	5	Solid	Overpack	0.2	10	-	labelled F2986	
	-	Poly	1	0.1	5	Solid	Overpack	0.1	5	-	labelled Nickel Acetate	
	-	Poly	1	0.1	5	Solid	Overpack	0.1	5	-	Red Powder	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Oakite Aluminum Cleaner	
H11	T33	Poly	1	-	50	Solid	Tank	-	50	-	goldish brown - Full	
	V06	Steel	1	32	239	Liquid	Vat	8	60	-	labelled Passivate Tank - elevated VOCs, 25% full	
Outside behind H11	V49	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	V50	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	T45	Poly	1	-	-	-	Tank	-	-	-	Filled with Trash and Debris	
F5	-	Poly	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Anodal ES1	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Aqua Ammonia	
	-	Poly	1	4	30	Liquid	Drum	2	15	-	labelled Acetic glacial	
	-	Fiber	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	-	1	-	-	-	Cylinder	-	-	-	unknown contents	
F6	-	Poly	3	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	various	10	-	-	-	various small containers	-	-	-	cleaning products	
F7	-	Poly	4	7.4	55	Solid	Drum	30	220	-	solid white crystalline waste	
	T34	Poly	1	137	1025	solid	Tank	85	636	-	White solid - 32" from top	
	T35	Poly	1	137	1025	Solid	Tank	78.5	587	-	white solid - 36" from top	
	T36	Poly	1	402	3007	Liquid	Tank	303.6	2271	1	labelled Spent Acid - black clear liquid 23.5" from top	
	T37	Steel	1	402	3007	Liquid	Tank	393.6	2944	2.5	labelled Spent Acid - brown clear liquid 2" from top	689

Table 3- December 13, 2013
Container Volumetric Calculations
Bedford Anodizing Site Assessment
Macedonia, Summit County, Ohio

Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments	Volumetric change since 10/25/13 (gallons)
F7 and E7	V07	Steel	1	648	4847	Both	Vat	108	808	-	liquid 60" from top, 0.5" yellow liquid over white frozen sludge	
	V08	Steel	1	180	1346	Both	Vat	78.75	589	13	27" from top, (1" yellowish liquid over white sludge)	
E7	D13	Poly	3	7.4	55	Both	Drum	22	165	11	no labels - solids with liquids on top	
	T38	Poly	1	269	2012	Liquid	Tank	35.4	265	13	labelled Spent Alkali - liquid 73" from top (2" yellow liquid over white sludge)	-1171
	V09	Steel	1	234	1750	Liquid	Vat	224.25	1677	1	Black opaque liquid, 3" from top	1239.5
	V10	Poly	1	675	5049	Both	Vat	290.25	2171	13	liquid 41" from top, 2" yellow liquid over white sludge	
	V11	Steel	1	525	3927	Liquid	Vat	124.25	929	1	Black opaque liquid, 55" from top	-1689
	T39	Poly	1	170	1272	Both	Tank	58.8	440	-	labelled Spent Alkali - liquid 47" from top (white frozen sludge)	
	T40	Poly	1	192	1436	Both	Tank	73.89	553	3	labelled Spent Alkali - Brownish red liquid 37" from top	194
	V12	Steel	1	614	4593	Liquid	Vat	28.35	212	12.5	liquid 74.5" from top, off white frozen sludge	
	D11	Poly	47	7.4	55	Solid	Drum	221	2585	13.5	solid white crystalline waste	
D7 and E7	D12	-	-	-	-	-	Drum	-	-	11	solid white crystalline waste	
	-	Steel	2	7.4	55	-	Drum	-	-	-	empty	
D7	V13	Steel	1	96	718	Solid	Vat	96	718	10.5	labelled Treated Alkali - full of white solid	
	V14	Steel	1	96	718	Solid	Vat	96	718	10	labelled Treated Alkali - full of white solid	
F8	V15	Steel	1	128	957	Solid	Vat	128	957	5.5	labelled Treated Alkali - full of white solid	
	T41	Poly	1	13	97	-	Tank	-	-	-	empty	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	no label	
	-	Poly	1	4	30	Liquid	Drum	4	30	-	labelled Acetic Acid glacial	
	V16	Steel	1	160	1197	Solid	Vat	120	898	5.5	white crystalline solid waste 1' from top	
E8	V17	Steel	1	96	718	Solid	Vat	73.92	553	6	white crystalline solid waste 22" from top	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal	
	D14	Poly	12	7.4	55	Solid	Drum	88.8	660	13	solid white crystalline waste	
	D15	-	-	-	-	-	Drum	-	-	12	solid white crystalline waste	
	-	Fiber	1	0.1	5	Solid	Drum	0.1	5	-	yellow powder	
F9	-	Poly	1	7.4	55	-	Drum	-	-	-	empty	
	-	Poly	9	0.6	5	Liquid	Small Container	6	45	-	Sulfuric Acid for Color Bath label	
F10	-	various	16	0.6	5	Liquid	Small Container	-	-	-	3 Aluminum Cleaner, 4 Lubricants, 2 Roof Coating	
F11	-	Steel	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	various	3	-	-	-	Small Container	-	-	-		
C10, D10, and E10	D03	Poly	72	7.4	55	Solid	Drum	532	3960	13	solid white crystalline waste	
	D04	Poly	-	-	-	-	Drum	-	-	12.5	solid white crystalline waste	
	D05	Poly	-	-	-	-	Drum	-	-	11	solid white crystalline waste	
	D06	Poly	-	-	-	-	Drum	-	-	11	solid white crystalline waste	
	D07	Poly	-	-	-	-	Drum	-	-	2.5	solid white crystalline waste	
	D08	Poly	-	-	-	-	Drum	-	-	13	solid white crystalline waste	
	D09	Poly	-	-	-	-	Drum	-	-	10.5	solid white crystalline waste	
	D10	Poly	-	-	-	-	Drum	-	-	10.5	solid white crystalline waste	
	-	-	1	-	-	-	Cylinder	-	-	-	refridgerant	
C8, D8, E8 and C9, D9, E9 Metal Fab Shop	-	Steel	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	Poly	1	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	Steel	6	0.4	3	Liquid	Small Container	2.4	18	-	lubricant	
	-	Poly	1	0.6	5	Solid	Small Container	0.6	5	-	buffing compound	
	-	Steel	2	7.4	55	Solid	Drum	15	110	-	used buffing compound	
	-	Steel	8	0.6	5	-	Small Container	-	-	-	empty	
A8, B8, and C8	-	Poly	1	7.4	55	Solid	Drum	7.4	55	-	used buffing compound	

Table 3- December 13, 2013
Container Volumetric Calculations
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Building Grid Area	Drum, Tank or Vat Designation Number	Container Material	Number of Containers	Total Volume of Container (ft³)	Total Volume of Container (gallons)	Solid or Liquid or Both	Container Description	Volume of Container Contents (ft³)	Volume of Container Contents (gallons)	pH Screening Reading	Comments	Volumetric change since 10/25/13 (gallons)
A6, B6, C6 and A7, B7, C7	-	Poly	1	7.4	55	Solid	Drum	7.4	55	-	used buffing compound	
	-	Poly	2	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	Fiber	2	7.4	55	-	Drum	-	-	-	Filled with Trash and Debris	
	-	Poly	6	7.4	55	Solid	Drum	44	330	-	solid white crystalline waste	
	V18	Steel	1	96	718	Solid	Vat	72	539	5.5	white crystalline solid waste 1' from top	
	-	-	3	-	-	-	Cylinder	-	-	-	Argon Gas	
	-	-	1	-	-	-	Cylinder	-	-	-	Oxygen Gas	
	-	Steel	50	-	-	Liquid	Small Container	-	-	-	various aerosols and paints	
	-	-	1	-	-	-	Cylinder	-	-	-	Helium Gas	
	-	-	1	1.3	10	Liquid	Small Container	1.3	10	-	Parts Washing Solvent	
C4	-	various	20	-	-	-	Small Container	-	-	-	various cleaners	
	-	Poly	1	7.4	55	Liquid	Drum	7.4	55	-	labelled Anodal	
G3 - G8 and H3 - H8	-	Poly	2	7.4	55	Liquid	Drum	15	110	-	labelled Aluminum Etch	
	V19	Steel	1	840	6283	Liquid	Vat	145.2	1086	2.5	69.5" from top, 1" frozen yellow liquid over white solid	-2055.5
	V20	Steel	1	840	6283	Both	Vat	429.6	3213	13.5	No liquid, 41" from top of solid white material	
	V21	Steel	1	630	4712	Liquid	Vat	434.7	3252	2.5	yellowish frozen liquid, 26" from top	896
	V22	Steel	1	630	4712	Solid	Vat	630	4712	11	white crystalline alkali solid waste	
	V23	Steel	1	630	4712	Solid	Vat	630	4712	11	white crystalline alkali solid waste	
	V24	Steel	1	630	4712	Both	Vat	495	3703	14	18" from top, 2" yellow liquid over white sludge	
	V25	Steel	1	630	4712	Both	Vat	150.3	1124	14	64" from top, 3" yellow liquid over white sludge	
	V26	Steel	1	630	4712	Both	Vat	315	2356	14	42" from top, 2" yellow liquid over white sludge	
	V27	Steel	1	525	3927	Both	Vat	427.5	3198	3	16" from top, 2" blue liquid over white sludge	
	V28	Steel	1	735	5498	Both	Vat	480.9	3597	6.5	29" from top, 2" red liquid over white sludge	
	V29	Steel	1	735	5498	Liquid	Vat	332.85	2490	4	46" from top, brown liquid	
	V30	Steel	1	840	6283	Liquid	Vat	159.6	1194	7.5	68" from top, white sludge	
	V31	Steel	1	840	6283	Liquid	Vat	120	898	8.5	72" from top, frozen liquid	
	V32	Steel	1	840	6283	Liquid	Vat	399.6	2989	8	44" from top, frozen liquid	-1723.25
	V33	Steel	1	840	6283	Both	Vat	210	1571	4.5	63" from top, brown frozen liquid over white sludge	-1570.5
	V34	Steel	1	100	748	Liquid	Vat	63.4	474	8.6	38" from top, blue frozen liquid	
	V35	Steel	1	840	6283	Liquid	Vat	320.4	2397	3.5	52" from top, brown frozen liquid over white sludge	-2315.25
	V36	Steel	1	735	5498	Both	Vat	218.4	1634	6.8	59" from top, brown frozen liquid over white sludge	-2489.5
	V37	Steel	1	735	5498	Liquid	Vat	165.9	1241	4	65" from top, brown frozen liquid	
	V38	Steel	1	438	3276	Liquid	Vat	51.9	388	3	74" from top, brown frozen liquid	-2069
	V39	Steel	1	630	4712	Both	Vat	22.5	168	6.6	81" from top, frozen white sludge	
	V40	Steel	1	735	5498	Liquid	Vat	78.75	589	7	75" from top, orange frozen liquid	-2160
	V41	Steel	1	735	5498	Both	Vat	8.4	63	7	83" from top, white frozen sludge	
	V42	Steel	1	735	5498	Both	Vat	122.85	919	3	70" from top, frozen liquid over white sludge	-3204.5
	V43	Steel	1	630	4712	Liquid	Vat	472.5	3534	5	21" from top, brown frozen liquid	
	V44	Steel	1	630	4712	Both	Vat	82.8	619	7.4	73" from top, brown frozen sludge	
	V45	Steel	1	840	6283	Both	Vat	180	1346	7.5	66" from top, frozen liquid/sludge	-3366.25
	V46	Steel	1	735	5498	Liquid	Vat	135.45	1013	7.5	68.5" from top, white frozen sludge	-3110.5
	V47	Steel	1	735	5498	Liquid	Vat	181.65	1359	7.5	63.25" from top, white frozen sludge	-2764.5
	V48	Steel	1	840	6283	Liquid	Vat	129.6	969	7.3	71" from top, no liquid, residual sludge	-601.75
A9, A10, A11 and B9, B10, B11	T42	Fiberglass	1	-	-	-	Tank	-	-	-	air stripper - empty	
	T43	Fiberglass	1	-	-	-	Tank	-	-	-	air stripper - empty	
	-	Steel	67	0.6	5	Liquid	Small Container	-	-	-	various levels of contents - heavy duty lubricant	
	-	Steel	12	0.1	1	Liquid	Small Container	-	-	-	various levels of contents - paint	

Table 3- December 13, 2013
Container Volumteric Caclulations
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Macedonia, Summit County, Ohio

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Outside B11 South	T44	Fiberglass	1	1571	11751	-	Tank	-	-	-	contents unknown	
Outside West Canopy	-	Steel	1	616	4607	Solid	Rolloff	616	4607	5	white crystalline alkali solid waste	
	-	Poly	2	7.4	55	Liquid	Drum	-	-	-	appears to be rainwater collected	
	T46	Poly	1	28	209	Liquid	Tank	28	209	6.5	Caustic Soda Label	
	T47	Poly	1	28	209	-	Tank	-	-	-	Trash and Debris	
	T48	Poly	1	28	209	-	Tank	-	-	-	Trash and Debris	
	T49	Poly	1	28	209	-	Tank	-	-	-	Trash and Debris	
	T50	Poly	1	15	112	-	Tank	-	-	-	empty	
	T51	Poly	1	-	150	-	Tank	-	-	-	empty	
	T52	Poly	1	63	471	-	Tank	-	-	-	empty	
	T53	Poly	1	154	1152	-	Tank	-	-	-	empty	
	T54	Poly	1	154	1152	-	Tank	-	-	-	empty	
	T55	Poly	1	38	284	-	Tank	-	-	-	empty	
	T56	Poly	1	28	209	solid	Tank	-	-	13	3 inches of solid crystalline material	
	V52	Steel	1	240	1795	Solid	Vat	192	1436	5	solid white Alkali Waste 1' from top	
	V53	Steel	1	160	1197	-	Vat	-	-	-	Filled with Trash and Debris	
	V54	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top	
	V55	Steel	1	128	957	Solid	Vat	96	718	5	solid white Alkali Waste 1' from top	
	V56	Steel	1	385	2880	Solid	Vat	330	2468	5	Large Hopper - solid white Alkali Waste 1' from top	
	V57	Steel	1	128	957	Solid	Vat	96	718	6	solid white Alkali Waste 1' from top	
	V58	Steel	1	160	1197	-	Vat	-	-	-	Filled with Trash and Debris	
	V59	Steel	1	120	898	-	Vat	-	-	-	empty	
	V60	Steel	1	264	1975	Solid	Vat	216	1616	5	solid white Alkali Waste 1' from top	
	V61	Steel	1	154	1152	Solid	Vat	116	868	5	solid white Alkali Waste 1' from top	
	V62	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top	
	V63	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top	
	V64	Steel	1	160	1197	Solid	Vat	120	898	5	solid white Alkali Waste 1' from top	
	V65	Steel	1	100	748	-	Vat	-	-	-	Filled with Trash and Debris	
	V66	Steel	1	330	2468	Solid	Vat	281	2102	5	solid white Alkali Waste 1' from top	
	V67	Steel	1	120	898	-	Vat	-	-	-	empty	
	V68	Steel	1	80	598	Solid	Vat	60	449	5	solid white Alkali Waste 1' from top	
	V69	Steel	1	135	1010	Solid	Vat	101	755	7.5	solid white Alkali Waste 1' from top	
	V70	Steel	1	210	1571	-	Vat	-	-	-	empty	
	V71	Steel	1	12	90	Liquid	Vat	6	45	5	liquid 1.5' from top	
	V72	Steel	1	-	-	-	Vat	-	-	-	empty	
	V73	Steel	1	-	-	-	Vat	-	-	-	empty	
	V74	Steel	1	-	-	-	Vat	-	-	-	empty	
	V75	Steel	1	-	-	-	Vat	-	-	-	empty	
	V76	Steel	1	-	-	-	Vat	-	-	-	empty	
	V77	Steel	1	28	209	-	Vat	-	-	-	Filled with Trash and Debris	
	V78	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	V79	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	V80	Steel	1	-	-	-	Vat	-	-	-	empty	
	V81	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	V82	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	V83	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	V84	Steel	1	-	-	-	Vat	-	-	-	Filled with Trash and Debris	
	V85	Poly	1	128	957	Liquid	Vat	16	120	5	Only 6" of liquid	
	V86	Steel	1	-	-	-	Vat	-	-	-	J-shaped - empty	
	V87	Steel	1	-	-	-	Vat	-	-	-	J-shaped - empty	

ATTACHMENT C
PHOTOGRAPHIC DOCUMENTATION



Site: ER-Bedford Anodizing Tanks and Vats
Photograph No.: 1
Direction: Northeast
Subject: General overview of building interior

Date: August 21, 2013
Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats
Photograph No.: 2
Direction: East
Subject: Wastewater treatment area containing 21 tanks

Date: August 21, 2013
Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats
Photograph No.: 3
Direction: North
Subject: Main anodizing line containing 30 vats

Date: August 21, 2013
Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats
Photograph No.: 4
Direction: East
Subject: Spilled material on the floor near a tote labeled sulfuric acid, corrosive

Date: August 21, 2013
Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

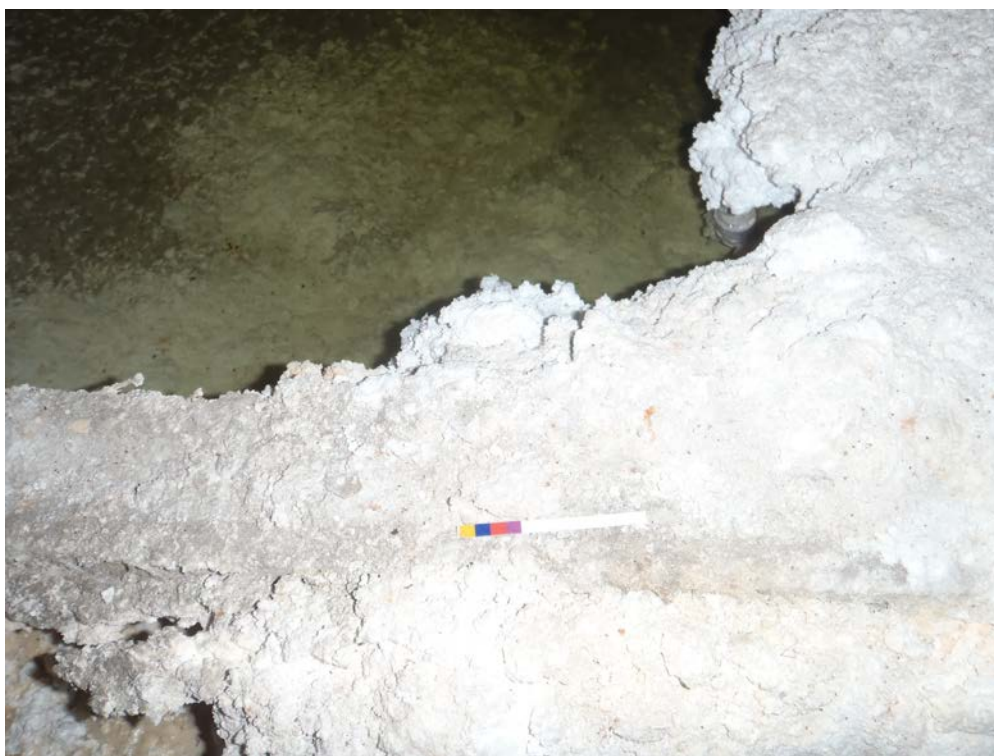
Photograph No.: 5

Direction: NA (Down)

Subject: Spilled material on the floor at the south end of the main anodizing line

Date: August 21, 2013

Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

Photograph No.: 6

Direction: NA (Down)

Subject: pH screening of open vat on the main anodizing line

Date: August 21, 2013

Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

Photograph No.: 7

Direction: East

Subject: Flooded area at the north end of the main anodizing line

Date: August 21, 2013

Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

Photograph No.: 8

Direction: Northwest

Subject: Covered equipment storage pad containing 11 tanks, 36 vats, and other equipment

Date: August 21, 2013

Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

Photograph No.: 9

Direction: West

Subject: 7,500-gallon concrete vaults used to collect and store waste liquids prior to treatment

Date: August 21, 2013

Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

Photograph No.: 10

Direction: Southeast

Subject: Tank T-16 located near the wastewater treatment area

Date: August 21, 2013

Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

Photograph No.: 11

Direction: NA (Down)

Subject: Northernmost sump installed in the drainage ditch

Date: August 21, 2013

Photographer: TJ McFarland



Site: ER-Bedford Anodizing Tanks and Vats

Photograph No.: 12

Direction: North

Subject: Vats containing white solid alkali waste on the covered equipment storage pad

Date: August 21, 2013

Photographer: TJ McFarland